

# HQ

DEC 81

## LAKEHEAD AMATEUR RADIO CLUB BULLETIN

*Founded 1934      Incorporated 1979*

HIGH-Q for December 1981

The December Meeting of the Lakehead Amateur Radio Club will be held on Thursday, December 10 1981. This will be the last meeting for 1981 so come out and see what's happening in your club. There are some very important decisions to be made this meeting, not the least of which is where to go for coffee after the meeting. If that won't get you out nothing will.

On your calendar of coming events be sure to mark February 20, 1982. That is the tentative date of the annual LARC Dinner Meeting. It will be at the Airplane Motel. The cost will be \$10.50 per person. By the way the 20th is a Saturday night so there's no excuse for not showing up.

This month the honour roll of people who contributed to HIGH-Q are:

Dan Pearson	VE3KRO
Gary Walsh	VE3JAF
Lorne Saxberg	
Jamie Green	VE3KRF

Just enough space left for me to wish you all a very Happy and Holy Christmas, 1981 and all the best in the New year.

Merry Christmas from the 3½ Ungers

Bd VE3EFC

### CLUB STATION VE3-FW

Minutes of the November 1981 Meeting

The meeting was called to order by club President Laurie - BCD at 8:03 PM.

Vlad - KRV moved that the minutes of the October meeting be accepted as published in HI-Q. The motion was seconded by Bill - EFC and was passed.

Bill - XJ presented the club \$1100 for the sale of the dish. Then he presented the club with a bill for \$43.69 for cables used by the club during the Canada Games. Jim - KRD moved that the club pay Bill - XJ. The motion was seconded by John - HTM and was passed.

A new Awards Chairman was appointed, he is Ian - LMN. He takes over from Dianne - JAW.

Vic - ECV, the club station manager, asked for volunteers to put up the club beam, Vlad - KRV, Tom - EEW and Bob - KRL volunteered.

Bill - XJ gave a report on the status of YQT. It seems there is an open in the antenna and that someone was needed to climb up and take the antenna down.

Jim - KRD presented a motion that the club purchase its own repeater, the motion was seconded by Ed - KRP and was passed. Jim - KRD also moved that the club set up a Repeater Committee to look after the new repeater and to keep written records of its activities. The motion was seconded by Bob - KRL and was passed.

Bill - XJ moved that we purchase the repeater for \$300 with written guarantees. The motion was seconded by Ivan - LMN and was passed.

Gary - HJS put forward a motion that the club purchase the 1982 American and Foreign Callbooks. The motion was seconded by Dave - KRY and was passed.

Vic - ECV moved that the club also purchase a RSGB Handbook. The motion was seconded by Bill - EFC and was passed.

Ed - KRP moved that the meeting be adjourned, the motion was seconded by Vic - ECV and was passed. The meeting was adjourned at 9:30.

HIGH - Q

HITHER AND WHENCE...JAA is putting up a tower; AYZ is putting up a beam; HJS got callsign license plates; LMN is improving his ground system; HZW now can hear things other than Hydro noise, thanks to the DCC; KRO is using a modified CB rig for Moose calling; HCM has a new pocket computer; ZG has a tower up with TH6DXX; BCD is keeping in touch with friends out west; LMD got his advanced, congratulations; ECV was operating QRP from VE4; HTM is getting his control system on two; KRP has a Glass TTY working with KIM; JAY has twins.....

HIGH - Q

Looking for something to do? Why not check into the NWOPN. It meets each nite a 0015 Z on 3750 kHz. See you on the net.

HIGH - Q

The following is a reprint from RADIO NEDERLANDS publication called "MEDIA NETWORK COMPUTER INFORMATION RELEASE"

On september 10/81 Radio Netherlands made a unique experiment for international short-wave broadcasting, it was decided that computer programs in machine readable form might be readable if broadcast over the air.

A computer program could be recorded onto the tape at the studios in Hilversum, Holland, broadcast over short-wave and recorded by the listener. If conditions were ideal, the listeners home computer should then be able to use the program transmitted. Three home computers were selected for the experiment, these were the Apple; Radio Shack TRS-80 and Commodore PET systems.

235 listeners responded to the request for feedback. Of these 42% were successful in copying a perfect, or near perfect program, which was then read by their home computer. Only listeners who had direct connections between receiver and cassette recorder were able to make satisfactory copies. 10 % of listeners who recorded the program off air and were unsuccessful at the first attempt, found that by re-recording onto a second tape machine, and raising the level of the signal, resulted in an acceptable copy. 5 listeners reported that adjustment of the tone control, boosting the treble response was critical. Bandwidth setting on the short-wave receiver was important. Those who used settings lower than 5 kHz reported a failure.

It is clear that transmission of computer data in machine readable form is practical via international short-wave radio.

Therefore, it is clear that the best chance of reliable copy is obtained when: -

- a) recording is made directly from receiver to recorder
- b) levels of recording are as high as possible without too much distortion
- c) the signal is processed at the transmitting end to ensure maximum boosting of treble frequencies
- d) the receiver is operated at the widest possible bandwidth, without allowing interference from adjacent broadcasting stations
- e) tone controls on recorders and receiver are adjusted for maximum treble boost

The next broadcast of computer programs will be on JANUARY 28, 1982. This will be broadcast on the following frequencies:

TIME (GMT)	FREQUENCIES (KHZ)	
07:50	9715, 9770	Pacific
08:50	9715	Pacific
09:50	15560, 11930, 9895, 6045, 5955	Europe
13:50	17605, 11930, 9895, 6045, 5955	Europe
18:50	15220, 6020	Africa
20:50	21685, 17695, 17605, 15220, 9715	Africa & Europe

Con't next page.....

HIGH-Q

The above transmissions are on Thursday, January 28th. Below are two transmissions for North America which are broadcast on Friday January 29th 1982 according to GMT. However remember that in the target area it will still be Thursday evening.

TIME (GMT)	FREQUENCIES (KHZ)	
02:50	9590, 6165	North America East
05:50	9715, 6165	North America West

We intend to broadcast a sunrise-sunset program suitable for the short-wave listener with the following computers: Sinclair ZX-81, TRS-80 Model 1 Level 2 and Pet

For further info or a program schedule please contact

Jonathan Marks  
English Section  
Radio Netherlands  
P.O. Box 222  
1200JG HILVERSUM  
Holland

Thanks to Gary Walsh VE3JAF and Lorne Saxberg for the above article.

HIGH-Q

THE BUCKETENNA

This dummy antenna uses plain ordinary water as both the resistive and heat dissipating elements! It can handle the output of any transmitter the more water you have the more power it can handle. The construction is as follows: get a 5 lb peanut butter tub and mount a coax connector (SO 239) on it. Solder a piece of number 8 copper wire to the center terminal and bend another piece into a hairpin loop around it and fastened it under two of the mounting screws of the connector. The bucket is then filled with water (distilled). An ohm meter check should now show a resistance of approx. 5000 Ohms. Now the magic ingredient - salt.

Put in a pinch and check the dummy load with a VSWR Bridge, keep adding salt until the VSWR drops to its lowest point. If you go past the point of lowest VSWR add a little water. The optimum seems to be about 1 part salt to 1000 parts water by weight. It may vary however depending upon the size of wire you use, the length of electrodes and their spacing.

As a bonus this "Bucketenna" offers an easy way to measure output power. These measurements can be made with about the same accuracy as conventional meters. All that is necessary is to measure the rate of temperature rise when the transmitter is feed to the load. As we can measure time more accurately than temperature the best results are secured by noting the time when the mercury in the thermometer is exactly in line with a degree mark. One BTU is the heat needed to raise one pound of water 1 Degree Fahrenheit, and one Calorie is the heat needed to increase

CON'T NEXT PAGE.....

HIGH-Q

The Bucketenna

that of one kilogram of water 1 Degree Celsius. And one kilowatt-hour is equal to 3413 BTU's or 860 calories. For best accuracy you should measure the water, but it's close enough to measure the volume, taking one pint(US) as one pound of water, one Imperial pint as 1.25 pounds and one litre as one kilogram.

To determine the power output multiply the weight of the water by the amount of temperature rise and divide by the time in seconds. If you are using English units multiply the result by 1.05 for the power in kilowatts; if you are using Metric units multiply by 4.18.

Now for an example; if you have five pounds of water at 60 Degrees Fahrenheit and after 440 seconds the water rises to 80 Deg. F.

$$\begin{aligned}\text{Power Output} &= 20 \times 5/440 \times 1.05 \\ &= .238 \text{ KW or } 238 \text{ Watts}\end{aligned}$$

Chuck Clark K4ZN  
from Niagara Penn. A.R.C.

HIGH-Q

For Sale, Trade or Swap

For sale, a Yaesu FL 2100B Linear with a spare set of tubes. Very little use on this unit. Asking \$450. Call Jim at 767-5267.

For sale, Hrachkit Keyer model 1410, already built and complete with manual, also an Archer straight key. Call Les at 623-6701.

For sale, Kenwood TR 7200A, 10 watt output, plus power supply and timer, complete with 14 crystals. Call Francis at 577-1616.

For sale, Bearcat 160 crystalless scanner, range is 32-50; 144-174 and 421-512 MHz, capacity of 16 channels, AC only, priority and dual scan speeds. Call Tim at 622-2310.

Wanted, a garage to put car in from December 23 to January 18.  
Call Tim at 622-2310.

Wanted, checkins for the Northwestern Ontario Phone Net, callin on 3750 kHz at 0015 UTC.

HIGH-Q

The Kenora ARC meets every month on the third Wednesday of the month at the home of Bill McIntosh, VE3APM. If you are in the area you might keep it in mind.

HIGH-Q

# IMPEDANCE

```

EEESZFEQVSRDTUPTUOGM
UCGTCXPXIZHRWEXNTMZFT
OUNCRGHUNBJAQIYPKMR
AYUAI AAAEDZAZWAF TVRI
TGCRNRWISSUYFVNHCZCU
HANRIOBSRELCN JNBHYRJ
NNRITESHMEZITIEAIOJT
EIOQTS GEGA AJ OATXNNWR
DKDIRA INRNTCEC NNGGUA
DSNCSLLRIYICTZACQ MEN
TRUBASEUETT LHA TJ EISS
SKIITPILDTANPN EEPJF
CUNVZFAMLOCNJUVCSYXO
FMGXIVJCSAMAITOVEVJR
HXKOKNKTINRNRMUCLNTM
FADFMLGXOTAASARLQPUA
RESISTIVEE IARPUHEVOPT
QMRNXOUZCITNTNRCTQNI
KCPWXYENHVNACGSGKTIO
MBGYNFKIVYDYRETQETJN

```

FIND THESE HIDDEN WORDS IN THE ABOVE PUZZLE:

antenna	bridge	capacitance	characteristic
coils	coupling	driving	inductance
input	matching	modulating	output
parallel	phase	ratio	reactance
resistive	resonance	surge	terminating
transformation	transmatch	transmission	

HERE IS THE ANSWERS TO LAST MONTHS PUZZLE:

```

. R . . . N . . . . .
. . A . . . O . . . . . R O T A T O R S
. . . D . . W I . . . . . S C . . . . .
. . . . I I . . T . . . . I P . . . F .
. F H V N A . . V A . . P . . A . . . H
. . . D . . T E A . Z O . . . . . R . . .
. . O . . . R I B B R I . C . . . T . .
. M . . . T . E O T R . R H O M B I C .
. . . . I . V . O N . E . A . A . . . .
L . . C . E . S D C . . T . L . X . . .
. O A . R . I . I I . . . S . O . I . .
. L N A . . . L . . R . . . . P . A .
. . G G . . O R E . . E . P . . . . L
. E . . W B . I A N . D C . P . . Z . .
. . . . A I T . G D O . A T . E . T . .
. . . R . O R . . A I B . U I . Z R . .
. . A . W . . E . . Y A H . Q C . E . .
. P . E . . . . . . L S . . N H . .
. . R . . E L O P I D . . S I . . A . .
. . . . . V S W R . . F . . L .

```

HIGH-Q

Christmas Messages 1981

VE3KRP sent 19 messages out via TwoMetres from Dawson Court on November 25, 1981. VE3KRO captured Ed's profile on Video Ed takes a dandy picture and did an excellent job on the Christmas Messages, amid the people coming and going in the hobby room. At Grandview Lodge on November 26, VE3HJS sent out 23 messages via Two Metres. VE3AYZ was making announcements over the loudspeakers and talking to the senior citizens about the messages (sore throat and all).

I feel sure this club has a good will ambassador hiding in VE3KRL, Bob. Bob spent some time talking to senior citizens and helping them making out message forms.

Repeater reception was quite low from inside the building so 146.520 MHz was used with good results to the hill country. Transmitting was all done from the main lobby (near the coffee shop).

Unfortunate for Vic, VE3JAR he had to stay home with a sore foot lucky for the club he didn't waste his time. Thanks goes to Vic for accepting over 25 calls in the 2 evenings. Thanks also goes to Hugh VE3EDW, and Les VE3AYZ for the calls they accepted.

Messages given out at the November L.A.R.C. Meeting to be sent by HF were; VE3EFC Bill, 5; VE3LMN Ian, 6; VE3HCM Tim, 13; VE3JAR Vic, 10; VE3AYZ Les, 10.

As the co-ordinator for this worth while project my job was minimal, the brunt of the organizing was done by Les, VE3AYZ and the workload was shared by all, who participated.

I found time to take some video pictures on both nites at the Senior Citizens Homes.

An unofficial count of the messages sent this year is 95. The official number wont be available till January 1982.

VE3KRO Dan  
Cordinator Christmas Messages /81

HIGH-Q

December Meeting

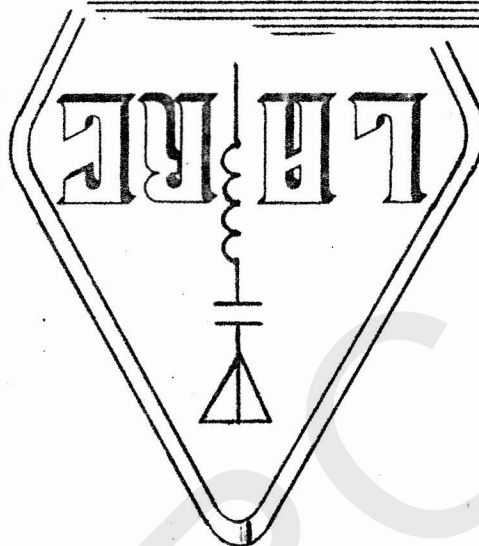
I have just received late word of a speaker at the December Meeting. Mike Nawrocki of the local DOC. Mike will talk on some of the recent rule changes that will affect you and possibly the effects of the recent WARC Conference. A question and answer period will follow. Think up a good question and come out.

HIGH-Q

If you have anything you wanted printed in HIGH-Q give me a call at 623-1542 before the first Wednesday of the month and it will be printed



# LAKEHEAD AMATEUR RADIO CLUB



HI-Q BULLETIN

LAKEHEAD AMATEUR  
RADIO CLUB  
**BOX 2571**  
THUNDER BAY 'P' ONT.  
CANADA  
P7B:5G1



TO

Bill Unger VE3EFC  
431 N. Syndicate Avenue  
THUNDER BAY "F", Ontario